

**CLAIMS:**

1. A processor-readable medium having processor-executable instructions that, when executed by a processor, performs acts comprising:

obtaining a digital good;

partitioning the digital good into a plurality of regions;

calculating rational statistics of one or more the regions of the plurality, so that the statistics of a region are representative of the region;

quantizing the statistics;

marking the digital good with the quantized statistics of the plurality of the regions.

2. A medium as recited in claim 1, wherein the calculating comprises generating the rational statistics of one or more regions of the plurality via a hashing function.

3. A medium as recited in claim 1, wherein the calculating comprises generating the rational statistics of one or more regions of the plurality via a hashing function employing a quotient of at least two weighted linear combinations of statistics of the one or more regions of the plurality.

4. A medium as recited in claim 1, wherein the calculating comprises generating the rational statistics of one or more regions of the plurality via a hashing function,  $h$ , where

$$h_i = \frac{\sum_{j \in \mathcal{R}_i} \alpha_{ij} s_j}{\sum_{j \in \mathcal{R}_i} b_{ij} s_j}$$

where:

- $\alpha_{ij}$  is the  $j^{\text{th}}$  element of  $\alpha_i$  and  $\alpha_i$  are a pseudo-random generated weight factors;
- $b_{ij}$  is the  $j^{\text{th}}$  element of  $b_i$  and  $b_i$  are a pseudo-random generated weight factors;
- $s$  denotes the digital good of dimension  $N \times 1$ ;
- $\mathcal{R}_i$  are the plurality of regions, where  $\mathcal{R}_i \subseteq \{1, 2, \dots, N\}$ .

5. A medium as recited in claim 1, wherein the partitioning comprises segmenting the digital good into a plurality of overlapped regions.

6. A medium as recited in claim 1, wherein the marking comprises embedding a watermark via quantization.

7. A modulated signal generated by a medium as recited in claim 1.

8. A computer comprising one or more processor-readable media as recited in claim 1.

9. A processor-readable medium having processor-executable instructions that, when executed by a processor, performs acts comprising

obtaining a digital good; and

using quantization, watermarking the digital good with a watermark, wherein such quantization is based upon semi-global characteristics of regions of the digital good, wherein such semi-global characteristics are generated via a hashing function employing a quotient of at least two weighted linear combinations of statistics of the regions of the digital good.

10. A modulated signal generated by a medium as recited in claim 9.

11. A modulated signal generated in accordance with the following acts:  
receiving input from a client computer by way of a communications network, the input providing a parameter indicative of a request for a modulated signal generated by a medium as recited in claim 9;

generating the modulated signal by the medium as recited in claim 9;

sending the modulated signal via the communications network.

12. A computer comprising one or more processor-readable media as recited in claim 9.

13. A system for facilitating the protection of digital goods, the system comprising:

a partitioner configured to segment a digital good into a plurality of regions;

a region-statistics calculator configured to calculate statistics of one or more of the plurality of regions, wherein the statistics of a region are representative of that region;

a region quantizer configured to quantize such statistics of a region;

a digital-goods marker configured to generate a marked good using the quantized statistics.

14. A system as recited in claim 13, wherein the region-statistics calculator is further configured to generate the rational statistics of one or more regions of the plurality via a hashing function.

15. A system as recited in claim 13, wherein the region-statistics calculator is further configured to generate the rational statistics of one or more regions of the plurality via a hashing function, employing a quotient of at least two weighted linear combinations of statistics of the one or more regions of the plurality.

16. A system as recited in claim 13, wherein the partitioner is further configured to segment a digital good into a plurality of overlapping regions.

17. A system as recited in claim 13, wherein the region-statistics calculator is further configured to generate the rational statistics of one or more regions of the plurality via a hashing function,  $h$ , where

$$h_i = \frac{\sum_{j \in \mathcal{R}_i} \alpha_{ij} s_j}{\sum_{j \in \mathcal{R}_i} b_{ij} s_j}$$

where:

- $\alpha_{ij}$  is the  $j^{\text{th}}$  element of  $\alpha_i$  and  $\alpha_i$  are a pseudorandom generated weight factors;
- $b_{ij}$  is the  $j^{\text{th}}$  element of  $b_i$  and  $b_i$  are a pseudorandom generated weight factors;
- $s$  denotes the digital good of dimension  $N \times 1$ ;
- $\mathcal{R}_i$  are the plurality of regions, where  $\mathcal{R}_i \subseteq \{1, 2, \dots, N\}$ .

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